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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,475	02/22/2002	Bhupendra K. Soni	GTI-1468	8518

33058 7590 01/24/2006

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EXAMINER	
SINES, BRIAN J	
ART UNIT	**PAPER NUMBER**
1743	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/080,475	SONI ET AL.	
	Examiner	Art Unit	
	Brian J. Sines	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 – 13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

Regarding claims 1 and 7, these both claims recite a "sealable means" and a "separation means." It is unclear as to whether the applicant intends to invoke 35 U.S.C. 112, sixth paragraph for claim interpretation and examination purposes (see MPEP § 2181). Does the applicant intend to invoke 35 U.S.C. 112, sixth paragraph for claim interpretation and examination purposes for these claimed features?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petty et al. (U.S. Pat. No. 6,478,961 B2) (hereinafter "Petty") in view of Devon (U.S. Pat. No. 5,138,101 A) (hereinafter "Devon"). Petty teaches a device for the sequestration or extraction and concentration of polar organic chemicals from water. Petty teaches the use of a separation means comprising a sealed microporous polymeric membrane enclosure containing a sorbent comprising a mixed sequestration phase comprising polystyrene-divinylbenzene sorptive resin (see col. 3, line 41 – col. 4, line 59). Petty does not specifically teach the use of a transparent reactor vessel or the additional apparatus components as claimed. However, the use of a transparent reactor vessel or glass flask including a sealing means comprising a septum and a magnetic stirring means are well known in the art of analytical chemistry in performing chemical extraction procedures (see MPEP § 2144.03). For example, Devon teaches the use of a glass flask equipped with a magnetic stir bar and a sealing means comprising a septum for use with a syringe for performing extraction procedures (see col. 2, lines 35 – 68). Hence, as evidenced by Devon, a person of ordinary skill in the art would accordingly have had a reasonable expectation for success in utilizing the apparatus for performing extraction procedures. Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of the apparatus

disclosed by Devon with the extraction system of Petty. Thus, Petty in view of Devon teaches all of the positively recited structure of the claimed apparatus.

2. Claims 7 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes et al. (U.S. Pat. No. 6,591,702 B2) (hereinafter "Hayes") in view of Petty et al. (U.S. Pat. No. 6,478,961 B2) (hereinafter "Petty") in view of Ray et al. (U.S. Pat. No. 5,470,535 A) (hereinafter "Ray"). Hayes teaches a method for analyzing contaminated soil samples using an adsorptive resin test comprising a two-compartment release mode comprising a fast release mode and a slow release mode using a zero headspace extraction vessel (see, e.g., col. 5, lines 12 – 32; col. 7, line 25 – col. 8, line 25). Hayes does not specifically teach the use of a separation means or containment means for holding the sorptive resin during use. Petty teaches a device and method for the sequestration or extraction and concentration of polar organic chemicals from samples. Petty teaches the use of a separation means comprising a sealed microporous polymeric membrane enclosure containing a sorbent comprising a mixed sequestration phase comprising polystyrene-divinylbenzene sorptive resin (see col. 3, line 41 – col. 4, line 59). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Thus, a person of ordinary skill in the art would have recognized the suitability in using a sorptive resin as disclosed by Petty for performing extraction procedures. Ray teaches a universal zero-headspace extractor vessel for analyzing volatile organic liquid samples. Ray teaches a transparent reactor vessel (10) comprising a sealable means (e.g., discharge port 26) for introducing liquid samples into the vessel (see col. 1, line 25 – col. 13, line 20; figures 1 – 3). Hayes teaches various pertinent

water-to-soil sample dilutions applied in the testing (see col. 8, lines 5 – 25). Ray teaches the use of a mechanical agitation means for mixing samples (see col. 9, lines 46 – 62). Dialysis bags are well known in the art to comprise microporous membranes that have known molecular weight cutoff values (see MPEP § 2144.03). Therefore, it would have been obvious to a person of ordinary skill in the art to utilize a dialysis bag as a separation means for containing the sorptive resin during use. As discussed above, Hayes in view of Petty and Ray teaches all of the positively recited structure of the apparatus provided in the claimed method, which merely recites the conventional operation of that apparatus. Therefore, it would have been obvious to a person of ordinary skill in the art to perform the method recited in the instant claims upon the apparatus of Hayes, Petty and Ray, as such is the intended operation of that apparatus.

Response to Arguments

1. Regarding the rejection of claims 1 – 6 under 35 U.S.C. 103(a) as being unpatentable over Petty in view of Devon, applicant's arguments filed 11/14/2005 have been fully considered but they are not persuasive. The applicant essentially argues that it would not have been obvious to a person of ordinary skill in the art to combine the teachings of Petty and Devon in order to provide for the claimed invention. In response to the applicants arguments, the Courts have held that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990) (quoting *Carella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986)). However, the "suggestion to modify the art to produce the claimed invention need not be expressly stated in one or all the references used to show obviousness." See *Cable Elec. Prods.*,

Inc. v. Genmark, Inc., 770 F.2d 1015, 1025, 226 USPQ 881, 886 (Fed. Cir. 1985). Rather, the test is whether the combined teachings of the prior art, taken as a whole, would have rendered the claimed invention obvious to one of ordinary skill in the art. See *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). The Courts have held that "[t]here are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." See *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 & 1458 (Fed. Cir. 1998) (see MPEP § 2143.01). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Finally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Petty does teach a device for the sequestration or extraction and concentration of polar organic chemicals from water. Petty teaches the use of a separation means comprising a sealed microporous polymeric membrane enclosure containing a sorbent comprising a mixed sequestration phase comprising polystyrene-divinylbenzene sorptive resin (see col. 3, line 41 – col. 4, line 59). Petty does not specifically teach the use of a transparent

reactor vessel or the additional apparatus components as claimed. However, the use of a transparent reactor vessel or glass flask including a sealing means comprising a septum and a magnetic stirring means are well known in the art of analytical chemistry in performing chemical extraction procedures (see MPEP § 2144.03). Devon does teach the use of a glass flask equipped with a magnetic stir bar and a sealing means comprising a septum for use with a syringe for performing extraction procedures (see col. 2, lines 35 – 68). Hence, as evidenced by Devon, a person of ordinary skill in the art would accordingly have had a reasonable expectation for success in utilizing the apparatus for performing extraction procedures. The Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of the apparatus disclosed by Devon with the extraction system of Petty. Thus, Petty in view of Devon teaches all of the positively recited structure of the apparatus as claimed.

2. Regarding the rejection of claims 7 – 13 under 35 U.S.C. 103(a) as being unpatentable over Hayes in view of Petty and Ray, applicant's arguments filed 11/14/2005 have been fully considered but they are not persuasive. The applicant essentially argues that it would not have been obvious to a person of ordinary skill in the art to combine the teachings of Hayes, Petty and Ray in order to provide for the claimed invention. In response to the applicants arguments, the Courts have held that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566, 1568 (Fed. Cir.

1990) (quoting *Carella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986)). However, the "suggestion to modify the art to produce the claimed invention need not be expressly stated in one or all the references used to show obviousness." See *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886 (Fed. Cir. 1985). Rather, the test is whether the combined teachings of the prior art, taken as a whole, would have rendered the claimed invention obvious to one of ordinary skill in the art. See *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). The Courts have held that "[t]here are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." See *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 & 1458 (Fed. Cir. 1998) (see MPEP § 2143.01). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Finally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Hayes does teach a method for analyzing contaminated soil samples using an adsorptive resin test comprising a two-compartment release mode

comprising a fast release mode and a slow release mode using a zero headspace extraction vessel (see, e.g., col. 5, lines 12 – 32; col. 7, line 25 – col. 8, line 25). Hayes does not specifically teach the use of a separation means or containment means for holding the sorptive resin during use. Petty teaches a device and method for the sequestration or extraction and concentration of polar organic chemicals from samples. Petty teaches the use of a separation means comprising a sealed microporous polymeric membrane enclosure containing a sorbent comprising a mixed sequestration phase comprising polystyrene-divinylbenzene sorptive resin (see col. 3, line 41 – col. 4, line 59). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Thus, a person of ordinary skill in the art would have recognized the suitability in using a sorptive resin as disclosed by Petty for performing extraction procedures. Ray teaches a universal zero-headspace extractor vessel for analyzing volatile organic liquid samples. Ray teaches a transparent reactor vessel (10) comprising a sealable means (e.g., discharge port 26) for introducing liquid samples into the vessel (see col. 1, line 25 – col. 13, line 20; figures 1 – 3). Hayes teaches various pertinent water-to-soil sample dilutions applied in the testing (see col. 8, lines 5 – 25). Ray teaches the use of a mechanical agitation means for mixing samples (see col. 9, lines 46 – 62). Dialysis bags are well known in the art to comprise microporous membranes that have known molecular weight cutoff values (see MPEP § 2144.03). Therefore, it would have been obvious to a person of ordinary skill in the art to utilize a dialysis bag as a separation means for containing the sorptive resin during use. As discussed above, Hayes in view of Petty and Ray teaches all of the positively recited structure of the apparatus provided in the claimed method, which merely

recites the conventional operation of that apparatus. Therefore, it would have been obvious to a person of ordinary skill in the art to perform the method recited in the instant claims upon the apparatus of Hayes, Petty and Ray, as such is the intended operation of that apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).